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## News from the Savannah River National Laboratory

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SRTC Wins R&D 100 Award

AIKEN, S.C. – Researchers at the Savannah River Technology Center have won a coveted R&D 100 Award, considered the Academy Awards of applied research and development. The R&D 100 Awards are presented each year by R&D Magazine to recognize the 100 most technologically significant developments of the year. ALPES is SRTC's fourth innovation to receive the prestigious R&D 100 Award.

SRTC received its award for Aerosol-to-Liquid Particle Extraction System (ALPES), a highly efficient, portable device that collects airborne particles, including chemical agents and microorganisms, and concentrates them into a liquid for scientific analysis. ALPES is able to collect any aerosol, including chemical agents; radioactive particles; microorganisms (such as spores, bacteria, and fungi); residual substances from explosives; and byproducts of manufacturing processes (such as lead in a battery factory).

An array of units, deployed throughout a public or private facility, could be a vital part of an anti-terrorism alert system. This system could quickly notify authorities of the existence of harmful biological, chemical, or explosive materials in the area.

SRTC's Dr. Cliff Carlson along with Dr. Justin Halverson and Jeff DeGange designed ALPES specifically to collect particles in the range of 0.3 to 2 microns, which is the size range of most concern for chemical, biological, and radiological hazards presented by terrorist weapons.

"We are honored to receive the highly prized R&D 100 award and the recognition from R&D Magazine editors," said SRTC Director Dr. Todd Wright. "Technologies that have won in the past have dramatically impacted the way we live our lives each day. Likewise, we believe ALPES will make a significant contribution to homeland security and dealing with issues involving the use of biological, chemical, or radiological weapons."

ALPES also could be effectively deployed to monitor for any number of harmful airborne particles in locales such as manufacturing facilities, clean rooms, cruise ships, seaborne containers, food production facilities, and grain elevators. Also, ALPES could collect airborne constituents derived from illicit drug manufacturing.

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